

Appl. No.: 10/595,731

Amdt. Dated: 7/14/08

Reply to Office Action Mailed: 4/15/08

REMARKS

The Office Action, dated April 15, 2008 addressed claims 1-6. In this document, no claims are deleted; new claim 7 is added; and claims 1-6 are amended. Thus, upon acceptance of this amendment, Claims 1-7 are presented in the application. Further, provided herewith is a substitute specification in both its marked-up form, as well as its clean form. No new matter is submitted with these amendments.

OBJECTIONS TO THE SPECIFICATION AND CLAIMS

The Office Action has indicated objections to the specification in that there were no section headings, and in that the claims were mentioned in the specification. The proper format of the specification, including proper headings, is submitted herewith. Likewise, reference to the claims in the specification has been removed and replaced by the actual claim language itself. Likewise, all reference numerals/characters have been removed from the claims. Applicant submits that no new matter has been introduced by the amendments made herein.

CLAIM REJECTIONS UNDER 35 U.S.C. §112

Claims 1-6 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims have been amended in conformance with US practice. For instance, the term “portion” appearing in the claims have been amended, consistent with the specification/amendments to the specification, wherein the term “section 71” and “section 72” have been renamed “lower portion 71” and “upper portion 72”, respectively, to distinguish from “section 81” and “section 82,” which have been renamed “lower section 81” and “upper section 82,” respectively. Likewise, proper antecedent basis has been created in amended claim 2. Claim 5 has been amended to remove the typographical error of the term “basis” and replace it with the term “base.”

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Support for the amendment can be found in the amended specification at page 8, line 11. Further, Applicant believes that no new matter has been introduced, but that the terminology now more clearly distinguishes the various features of the presently claimed invention. The claims as presented herein address all of the Examiner's concerns, and as such, withdrawal of this rejection is respectfully requested.

CLAIM REJECTIONS UNDER 35 U.S.C. §102(B)

Claims 1-6 stand rejected under 35 U.S.C. §102(b) as allegedly being unpatentable in view of USPN 4,715,778 to Katayama, et al. ("Katayama"). Applicant respectfully submits that Katayama does not anticipate Claim 1 because each and every element as set forth in that claim is not found, either expressly or inherently described, in the cited reference. In an anticipation rejection, the identical invention must be shown in as complete detail as is contained in the claim.

The presently claimed invention provides a simplified construction of a centrifugal compressor by allowing the construction to proceed intact with each compressor half including respective upper and lower portions including respective upper and lower half diaphragms and upper and lower suction half diaphragms, which may further include respective sections suitable for being respectively coupled with internal housings. These parts may further respectively be assembled as piles. In this way, the upper half diaphragm and the lower half diaphragm may be opened into two halves, preassembled into its respective half tanks and the assembly aligned and joined at a horizontal joint on site. This is particularly useful since such assemblies tend to weigh hundreds of tons, and are quite difficult to maneuver.

The centrifugal compressor of Katayama, on the other hand, describes a different assembly in that it describes an **axial** insertion of an assembled compressor rotor into the one-piece cylindrical compressor rotor chamber 1a. See the description at column 6 beginning at line 5, where assembly occurs at end walls (1b) and (1c). Thus the prior art describes an entirely different approach to providing a singular compressor wall, with its corresponding axial assembly and construction. The purpose of Katayama appears to be

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the avoidance of disassembly and transport of various pipe sections apart from the compressor casing itself.

For these reasons, Katayama does not anticipate the presently claimed invention. In short, the presently claimed invention describes a half section approach to assembly of a centrifugal compressor, whereas Katayama leaves the casing intact (one-piece) and describes removable end plates for axial assembly.

Thus it can be seen that Katayama does not teach, describe or suggest embodiments of the claimed invention. For at least these reasons, the presently presented claim 1 is novel with respect to Katayama.

The remaining claims 2-7 depend, directly or indirectly, from the independent Claim 1. When the recitations of claims 2-7 are considered in combination with the recitations of Claim 1, Applicant submits that these dependent claims are also patentable over the cited reference.

CONCLUSION

In view of the above amendments and remarks, Applicant respectfully submits that the application is in condition for allowance. A Notice of Allowance is therefore respectfully requested.

The Examiner may contact the undersigned if there are any remaining issues that can be resolved by telephonic communication.

Respectfully submitted,

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MULTISTAGE CENTRIFUGAL COMPRESSORAbstract

Multistage centrifugal compressor comprising at least one stage 10 which, in turn, comprises a lower half tank 11, an upper half tank 12, a series of lower half diaphragms 16, a shaft 13 equipped with a series of rotors 14, a series of upper half diaphragms 18, a lower suction half-diaphragm 51, an upper suction half-diaphragm 52, the lower suction half-diaphragm 51 and the upper suction half-diaphragm 52 include a portion 71 and a portion 72, respectively, suitable for being coupled with the lower half-diaphragms 16 and with the upper half-diaphragms 18, respectively, to form a first pile 41 of lower half-diaphragms 16 and a second pile 42 of upper half-diaphragms 18, respectively.